



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/845,051	04/27/2001	Sev K. H. Keil	24491-0007001	1476

26171 7590 04/01/2010
FISH & RICHARDSON P.C.
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER

LAstra, DANIEL

ART UNIT	PAPER NUMBER
----------	--------------

3688

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

04/01/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary	Application No. 09/845,051	Applicant(s) KEIL ET AL.	
	Examiner DANIEL LASTRA	Art Unit 3688	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 0101.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9,10,13-17,19-22,27-33,39-45,47,48,51-55,57-60 and 65-71 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-10, 13-17, 19-22, 27-33, 39-45, 47-48, 51-55, 57-60 and 65-71 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-7, 9-10, 13-17, 19-22, 27-33, 39-45, 47-48, 51-55, 57-60 and 65-71 have been examined. Application 09/845,051 (SYSTEM TO PROVIDE CONSUMER PREFERENCE INFORMATION) has a filing date 04/27/2001.

Response to Amendment

2. In response to Non Final Rejection filed 09/08/09, the Applicant filed an Amendment on 01/08/10, which amended claims 1, 22, 31, 39-45, 47-48, 51-55, 5760, 65-71.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 9-10, 13-17, 19-22, 27-33, 39-45, 47-48, 51-55, 57-60 and 65-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnston (US 6,826,541) in view of Herz (US 6,029,195).

Claims 1, 22, 39 and 60, Johnston teaches:

A computer-implemented method for calculating adjusted preference information, comprising:

storing, in a computer memory storage system and for a plurality of consumers,

Art Unit: 3688

preference information related to different attributes of a type of product, the stored preference information for an individual consumer including numerical values that are reflective of the individual consumer's preference for different attribute levels for the attributes of the type of product, and the plurality of consumers including a first consumer, a second consumer, and other consumers (see col 21, lines 15-30);

based on the stored preference information for the plurality of consumers dividing, using a processing device, the plurality of consumers into multiple different sub-groups of constituent members for whom similar preference information is determined to be stored in the computer memory storage system, each of the multiple different sub-groups including less than all of the plurality of consumers (see col 21, lines 20-30);

based on the preference information stored for the first consumer, generating using a processing device, a first set of trade-off questions for the first consumer that solicit answers from the first consumer regarding choices between different attribute levels for attributes of the type of product (see col 10, lines 30-67);

providing the first set of trade-off questions to the first consumer; predicting using a processing device, the first consumer's answers to the first set of trade-off questions (see col 10, lines 30-67);

receiving answers to the first set of trade-off questions from the first consumer; comparing preference information stored for the first consumer to information that is reflective of the preferences of constituent members of at least some of the multiple sub-groups of consumers (see col 24, lines 35-67);

based on results of comparing the preference information stored for the first consumer to the information that is reflective of the preferences of constituent members of some of the multiple sub-groups of consumers, determining that the preference information stored for the first consumer is similar to preference information stored for constituent members of a first one of the multiple sub-groups of consumers (see col 21, lines 15-30);

selecting, using a processing device, the first sub-group of consumers from among the multiple sub-groups of consumers as a match for the first of consumers being consumer based on having determined that the preference information stored for the first consumer is similar to preference information stored for constituent members of the first sub-group of consumers (see col 21, lines 15-30);

based on the first consumer's received answers to the first set of trade-off questions and the predicted answers to the first set of trade-off questions for the first consumer, determining, using a processing device, a first adjustment ratio for use in adjusting the stored value that is reflective of the first consumer's preference for the at least one attribute level, the first adjustment ratio specifying proportions in which the stored value that is reflective of the first consumer's preference for the at least one attribute level and the average value of the first sub-group's preference for the at least one attribute level are to be combined to adjust the stored value that is reflective of the first consumer's preference for the at least one attribute level (see col 25, lines 1-30 "profile would be database");

Art Unit: 3688

based on the preference information stored for the second consumer, generating, using a processing device, a second set of trade-off questions for the second consumer that solicit answers from the second consumer regarding choices between different attribute levels for attributes of the type of product (see col 13, lines 10-40; col 27, lines 55-61 “multiple clients”);

providing the second set of trade-off questions to the second consumer (see col 13, lines 10-40);

predicting, using a processing device, the second consumer's answers to the second set of trade-off questions (see col 25, lines 1-30);

receiving answers to the second set of trade-off questions from the second consumer (see col 13, lines 1-50);

comparing preference information stored for the second consumer to information that is reflective of the preferences of constituent members of at least some of the multiple sub-groups of consumers (see col 21, lines 20-30);

based on results of comparing the preference information stored for the second consumer to the information that is reflective of the preferences of constituent members of some of the. multiple sub-groups of consumers, determining that the preference information stored for the second consumer is similar to preference information stored for constituent members of a second one of the multiple sub-groups of consumers (see col 25, lines 1-30 “detailed profile would be database”

Art Unit: 3688

selecting, using a processing device, the second sub-group of consumers from among the multiple sub-groups of consumers as a match for the second consumer, based on having determined that the preference information stored for the second user is similar to preference information stored for constituent members of the second sub-group of consumers (see col 21, lines 20-30).

Johnston fails to teach:

for at least one attribute level of a particular attribute of the type of product, calculating, using a processing device, an average value of the first sub-group's preference for the at least one attribute level based on the stored values that are reflective of the first sub-group's constituent members' preferences for the at least one attribute level;

adjusting using a processing device, the stored value that is reflective of the first consumer's preference for the at least one attribute level as a function of the determined first adjustment ratio and the average value of the first sub-group's preference for the at least one attribute level by combining the stored value that is reflective of the first consumer's preference for the at least one attribute level with the average value of the first sub-group's preference for the at least one attribute level in the proportions for the stored value that is reflective of the first consumer's preference for the at least one attribute level and the average value of the first sub-group's preference for the at least one attribute level specified by the first adjustment ratio;

for the at least one attribute level, calculating, using a processing device, an average value of the second sub-group's preference for the at least one attribute level

Art Unit: 3688

based on the stored values that are reflective of the second sub-group's constituent members' preferences for the at least one attribute level;

based on the second consumer's received answers to the second set of trade-off questions and the predicted answers to the second set of trade-off questions for the second consumer, determining using a processing device, a second adjustment ratio for use in adjusting the stored value that is reflective of the second consumer's preference for the at least one attribute level, wherein the second adjustment ratio is different than the first adjustment ratio and specifies proportions in which the stored value that is reflective of the second consumer's preference for the at least one attribute level and the average value of the second sub-group's preference for the at least one attribute level are to be combined to adjust the stored value that is reflective of the second consumer's preference for the at least one attribute level; and

adjusting, using a processing device, the stored value that is reflective of the second consumer's preference for the at least one attribute level as a function of the determined second adjustment ratio and the average value of the second sub-group's preference for the at least one attribute level by combining the stored value that is reflective of the second consumer's preference for the at least one attribute level with the average value of the second sub-group's preference for the at least one attribute level in the proportions for the stored value that is reflective of the second consumer's preference for the at least one attribute level and the average value of the second sub-group's preference for the at least one attribute level specified by the second adjustment ratio. However, Herz teaches a system that calculates a particular user's profile by

Art Unit: 3688

dividing a group of users (i.e. target objects) into subgroups (i.e. clusters) (see col 28, lines 1-20), in such a way that similar users tend to be grouped in the same subgroup (see col 23, lines 60-67), calculating the average of the subgroup profile (see col 24, lines 15-25) and using said average to update the particular user's profile in order to predict that said particular user preference would resemble the known preferences of other users with similar profile (see col 28, lines 1-67). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the application was made, to know that Johnston would modify his invention to update a particular consumer profile using the average profile a subgroup of users, as taught by Herz in order to predict that a particular user profile would resemble the known interests of other users with similar profiles.

Claims 2 and 40, Johnston teaches:

wherein the preference information for the plurality of consumers includes normalized part worth values (see col 17, lines 40-50).

Claims 3 and 41, Johnston teaches:

wherein the preference for the plurality of consumers includes currency-normalized part worth values (see col 17, lines 22-50).

Claims 4, 27, 42 and 65, Johnston teaches:

wherein selecting the first sub-group of consumers includes selecting the first sub-group of consumers based on attribute levels identified as unacceptable by constituent members of the first sub-group of consumers (see col 21, lines 15-30).

Claims 5, 28, 43 and 66, Johnston teaches:

Art Unit: 3688

wherein the constituent members of the first sub-group of consumers identified similar attribute levels as unacceptable (see col 21, lines 15-30).

Claims 6, 29, 44 and 67, Johnston teaches:

wherein selecting the first sub-group of consumers includes selecting the first sub-group of consumers based on part worth values stored for constituent members of the first sub-group of consumers (see col 21, lines 15-30).

Claims 7, 30, 45 and 68, Johnston teaches:

wherein the constituent members of the first sub-group of consumers are associated with similar preference information (see col 21, lines 15-30).

claims 9 and 47, Johnston teaches:

wherein dividing the plurality of consumers into multiple different sub-groups include assigning consumers to sub-groups based on attribute levels that the consumers indicated as unacceptable (see col 21, lines 15-30).

Claims 10 and 48, Johnston teaches:

wherein dividing the plurality of consumers into multiple different sub-groups includes assigning consumers to sub-groups based on part worth values associated with the consumers (See col 21, lines 15-30).

claims 13 and 51, Johnston teaches:

determining an offer to sell a product based on the mixed preference information (see col 2, lines 50-60).

claims 14 and 52, Johnston teaches:

providing the offer to the consumer (see col 2, lines 50-60).

Art Unit: 3688

claims 15 and 53, Johnston teaches:

wherein the first sub-group of consumers is identical to the second sub-group of consumers (see col 21, lines 15-30 “members of an union”).

claims 16 and 54, Johnston teaches:

wherein the first sub-group of consumers does not include any consumers belonging to the second sub-group of consumers (see col 21, lines 15-31 “members of union APWU and Postal workers”).

claims 17 and 55, Johnston teaches:

wherein one or more of the constituent members of the first sub-group of consumers are members of the second sub-group of consumers (see col 21, lines 40-55 “same zip code”).

claims 19 and 57, Johnston teaches:

wherein the plurality of consumers comprises a predetermined number of past consumers for whom preference information is stored (see col 25, lines 5-15 “detailed profile would be databased”).

Claims 20 and 58, Johnston teaches:

wherein the predetermined number of past consumers are determined based on a time at which preference information associated with each of the predetermined number of consumers was collected (see col 25, lines 15-30 “baby boomers”).

Claims 21 and 59, Johnston teaches:

wherein the plurality of consumers comprises all past consumers for whom preference information was collected during a particular time period (see col 25, lines 15-30).

Claims 31 and 69, Johnston teaches:

A computer-implemented method for calculating adjusted consumer preference information, comprising:

receiving, for a plurality of consumers, preference information related to different attributes of a product, the received preference information for an individual consumer including numerical values that are reflective of the individual consumer's preference for different attribute levels for the attributes of the type of product, and the plurality of consumers including a particular consumer and other consumers (see col 10, lines 30-67);

currency-normalizing the received preference information for the plurality of consumers (see col 17, lines 20-67);

storing, in a computer memory storage system, the currency-normalized preference information for the plurality of consumers (see col 17, lines 20-67);

based on the stored, currency-normalized preference information for the plurality of consumers, dividing, using a processing device, the plurality of consumers into multiple different sub-groups of constituent members for whom similar currency-normalized preference information is determined to be stored in the computer memory storage system, each of the multiple different sub-groups including less than all of the plurality of consumers (see col 24, lines 20-50);

based on the currency-normalized preference information stored for the particular consumer, generating, using a processing device, a set of trade-off questions for the particular consumer that solicit answers from the particular consumer regarding choices

Art Unit: 3688

between different attribute levels for attributes of the type of product (see col 24, lines 1-20);

providing the set of trade-off questions to the particular consumer (see col 24, lines 1-20);

predicting, using a processing device, the particular consumer's answers to the set of trade-off questions (see col 24, lines 1-20);

receiving answers to the set of trade-off questions from the particular consumer (see col 24, lines 1-20);

comparing currency-normalized preference information stored for the particular consumer to information that is reflective of the currency-normalized preferences of constituent members of at least some of the multiple sub-groups of consumers (see col 21, lines 15-35);

based on results of comparing the currency-normalized preference information stored for the particular consumer to information that is reflective of the currency-normalized preferences of constituent members of some of the multiple sub-groups of consumers, determining that the currency-normalized preference information stored for the particular consumer is similar to currency-normalized preference information stored for constituent members of a particular one of the multiple sub-groups of consumers (see col 25, lines 1-30);

selecting, using a processing device, the particular sub-group of consumers from among the multiple sub-groups of consumers as a match for the particular consumer based on having determined that the currency-normalized preference information stored

Art Unit: 3688

for the particular consumer is similar to currency-normalized preference information stored for constituent members of the particular sub-group of consumers (see col 21, lines 15-35);

Johnston does not teach:

for at least one attribute level of a particular attribute of the type of product, calculating, using a processing device, an average value of the particular sub-group's currency-normalized preference for the at least one attribute level based on the stored currency-normalized values that are reflective of the particular sub-group's constituent members' currency-normalized preferences for the at least one attribute level;

based on the particular consumer's received answers to the set of trade-off questions and the predicted answers to the set of trade-off questions for the particular consumer, determining, using a processing device, an adjustment ratio for use in adjusting the currency-normalized stored value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level, the adjustment ratio specifying proportions in which the currency-normalized stored value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level and the average value of the particular sub-group's currency-normalized preference for the at least one attribute level are to be combined to adjust the currency-normalized stored value that is reflective of the particular consumer's preference for the at least one attribute level; and

adjusting, using a processing device, the stored currency-normalized value that is reflective of the particular consumer's currency-normalized preference for the at least

Art Unit: 3688

one attribute level as a function of the determined adjustment ratio and the average value of the particular sub-group's currency-normalized preference for the at least one attribute level by combining the currency-normalized stored value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level with the average value of the particular sub-group's currency-normalized preference for the at least one attribute level in the proportions for the currency-normalized stored value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level and the average value of the particular sub-group's currency-normalized preference for the at least one attribute level specified by the adjustment ratio. However, Herz teaches a system that calculates a particular user's profile by dividing a group of users (i.e. target objects) into subgroups (i.e. clusters) (see col 28, lines 1-20), in such a way that similar users tend to be grouped in the same subgroup (see col 23, lines 60-67), calculating the average of the subgroup profile (see col 24, lines 15-25) and using said average to update the particular user's profile in order to predict that said particular user preference would resemble the known preferences of other users with similar profile (see col 28, lines 1-67). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the application was made, to know that Johnston would modify his invention to update a particular consumer profile using the average profile a subgroup of users, as taught by Herz in order to predict that a particular user profile would resemble the known interests of other users with similar profiles.

Claims 32 and 70, Johnston teaches:

Art Unit: 3688

providing an offer based on the currency-normalized information (see col 17, lines 20-65).

claims 33 and 71, Johnston teaches:

providing the offer to the consumer (see col 2, lines 55-60).

Response to Arguments

4. Applicant's arguments filed 01/08/10 have been fully considered but they are not persuasive. The Applicant argues that Herz does not teach adjusting a stored value that is reflective of the first consumer's preference for at least one attribute level by combining the stored value that is reflective of the first consumer's preference for the at least one attribute level with an average value of the sub-group's preference for the at least one attribute level in proportions specified by a first adjustment ratio. The Examiner answers that Herz teaches a system that calculates a particular user's profile by dividing a group of users (i.e. target objects) into subgroups (i.e. clusters) (see col 28, lines 1-20), in such a way that similar users tend to be grouped in the same subgroup (see col 23, lines 60-67), calculating the average of the subgroup profile (see col 24, lines 15-25) and using said average to update the particular user's profile in order to predict that said particular user preference would resemble the known preferences of other users with similar profile (see col 28, lines 1-67). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the application was made, to know that Johnston would modify his invention to update a particular consumer profile using the average profile a subgroup of users, as taught by Herz in order to predict that a particular user profile would resemble the known interests

Art Unit: 3688

of other users with similar profiles. Therefore, contrary to Applicant's argument, the prior arts teach Applicant's claimed invention.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL LASTRA whose telephone number is 571-272-6720 and fax 571-273-6720. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LYNDIA C JASMIN can be reached on (571) 272-6782. The official Fax number is (571) 273-8300.

Art Unit: 3688

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/DANIEL LASTRA/
Primary Examiner, Art Unit 3688
March 27, 2010